Building a financial plan – The Numbers

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The numbers

- Calisthenics
- The Idea
- Revenue
- Costs
- Cash Table
- Financing



What's the difference between these three words?

I'll offer my simple definitions





The Income Statement

Revenue

Cost of Goods sold

Gross Profit

Operating expenses

Gross Margin = Gross Profit/Revenue

- salaries
- overhead
- travel
- services (insurance, lawyers, accountants)
- product development
- **Operating Profit**
- Interest, Tax, Depreciation, Amortization

Net Income#

AKA profit, earnings, the bottom line Boston University Technology Development

Operating Margin =

Operating Profit/Revenue



I/S: let's take a closer look – the head

- Revenue money coming in!
 - Sales: units, subscriptions, advertising commissions, services
 - Royalties (from a license)
- Cost of Goods Sold
 - AKA "variable costs"
 - Just those costs associated with the sold item
 - Materials, labor are the usual suspects
 - Sales commissions? Royalty payments? There's a lot of "creativity"
- Gross Profit & Gross Margin
 - Learn to talk about margins, with the accompanying face



I/S: let's take a closer look – the body

- Operating expenses
 - Fixed costs
 - Where all the work gets done
 - All the costs that'll occur whether you sell anything or not
- Operating profit and Operating Margin
 - EBIT (earnings before interest and tax)
 - And that other acronym (EBITDA, ew)

I/S: let's take a closer look – the legs

- Interest: what you owe a lender if you take out a loan
- Tax: ummm
- Depreciation: How we expense a capital cost** over time
 - Check it out: if you buy a \$10,000 piece of equipment, where does that show up in an income statement? Depreciation
 - Think for a moment about cash flow here. When did that \$10,000 leave your pocket?
- Amortization: another form of depreciation leave this to accountants to know the difference

** Capital expense v. Operating expense:

Capital expense is a lump sum payment, e.g. equipment, building, machinery Operating expense: an ongoing expense that shows up in the income statement



The Balance Sheet



Liabilities

- accounts payable

- a loan over a year

Shares owned by shareholders

Retained earnings

Equity

Why do I say profit is an idea?





One of the most important equations in business

P*Q

Where:

P = price

Q = quantity

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Check it out: P * Q

- A company's Market Capitalization (aka market cap, value of a company, company's valuation)
 - P = share price
 - Q = number of shares
- A company's sales
 - P = price of the product(s)
 - Q = number of products sold
- Market size (based on sales)
 - P = price of the product(s)
 - Q = number of products sold

What part of the story is this not telling?

Components of a financial plan



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Components of a financial plan

START HERE

- Objective
- Vision, strategic intent
- How to make money
- Value proposition
- Can you build it?
- ✓ ASSUMPTIONS

• Business model

- Business model
- Customer(s)
- Addressable market
 - Revenue forecast
 - ✓ ASSUMPTIONS



FINANCING

- Milestones
- Amount required
- Use of funds
- Type of funds
- Long term plan or Exit
- Capitalization table
- ✓ ASSUMPTIONS



Do you have an idea, a REAL idea? Really?

• A CA venture capital firm asks:

Can you build it?

Can you sell it?



Mike Gonnerman asserts:

"You need to articulate a vision, how you'll make money and when you'll breakeven"



- Prof Gupta suggests:
- "Run a back of the envelope (BOE) analysis because 99% of your (and my) ideas should be discarded"



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- SERIOUSLY
 - Value proposition
 - Customer conversations
 - Market NEED

I seriously doubt it

Must have that Product-Market fit!!!





The idea - assumptions



Any assumptions that lay the foundation for your idea

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- ✓ ASSUMPTIONS

COST

- Vendors
- ✓ Expense forecast
- (COGS, Operating)

✓ Cash table

- ✓ Break even
- ✓ ASSUMPTIONS

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- ✓ Milestones
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Revenue forecasting – the most difficult of all

- I'll tell you the trick
- I will
- That's why you're here isn't it? To hear the trick?
- Oh yes, there's a trick
- Ready?
- <u>CUSTOMERS AND COMPETITORS!</u>
- That's it. That's the trick. For real.



Revenue forecast – from three directions

- Top down macro
 - Addressable market
 - Assumptions about market penetration
 - Percentages
- Bottom up micro
 - House by house
 - Sale by sale
 - Click by click
- Sideways competitors, comparables
 - Annual reports
 - Interviews ALWAYS meet with your competitors!
 - Talk with experts to learn how others did it









What's an addressable market –

- NOT the size of the auto industry
- NOT the size of the medical industry
- It IS the market into which you can sell <u>DIRECTLY</u> your product or service
- Examples
 - Hot dog stand at Museum of Science
 - Cardiac Stent



Revenue- assumptions – important numbers

Price

- Product or service
- Sales cycle
 - How long from the time you meet a customer until you make a sale
 - What are the steps to making a sale

Pipeline

- How to build a pipeline
- How will it lead to a sale







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Costs tend to appear easier – but not if you want to do it right

- Basic costs are available, such as rent, people
- Cost of Goods Sold (COGS) takes a lot of work
 - THIS is important
 - Shipping time
 - Credit terms
- Your operating plan feeds your operating costs
 - Most entrepreneurs don't consider an operating plan, to their detriment
 - What type of operations will you have? In house? Outsourced?
- Headcount
 - When, who, you need to hire
- Space requirements and expansion
- Cost of development (product)
 - Talk with vendors, competitors, Advisors, other entrepreneurs
 - Assumptions, assumptions, assumptions

Know your breakeven – it's the point after which you start MAKING MONEY

- Breakeven by dollars, units, what have you
- This is a huge risk-reducer
- Don't give it another thought. Just DO it

$$B/E = \frac{Fixed Cos}{Price - Variable Costs}$$



Calculating B/E





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The cash table is my construct – but everyone has a version

INVESTMENT	Week 1	Week 2	Week 3	Week 4
Equity				
Loan				
Grant				
TOTAL				
REVENUE	Week 1	Week 2	Week 3	Week 4
Product 1				
Product 2				
TOTAL				
OPERATIONS	Week 1	Week 2	Week 3	Week 4
Travel				
Rent				
Salaries				
Materials				
TOTAL				Т
BANK BALANCE	Week 1	Week 2	Week 3	Week 4
Starting				
Ending				

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(COGS, Operating) **Cash table**

- ✓ Break even
- ✓ ASSUMPTIONS

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* If necessary. Will be required for equity financing



Milestones drive value, use of funds AND amount required

- Milestones should be
 - Objectively auditable
 - Adding value, by anyone's measure
 - Reducing risk, by anyone's measure
- Whatever resources you'll need to achieve your milestones is your "use of funds"
- Calculate how many \$\$ to reach each milestone and add up the milestones – that's how much you need

This is one of the most important slides in the deck

Don't ask: "How much money should I raise?"

Wrong question



Milestone-driven financial planning – the market will tell you what's important

Investors are buying milestones

- YOU should not be the person to state your milestones
- To determine what are the milestones for you:
 - Understand other companies' milestones (comparables)
 - Advisors and mentors
 - Customers
 - Acquirers
 - Investors
 - Collaborators



Exemplar activity: Product Development

- Engineer (FT): \$100,000/year
- Outsourced prototyping house: \$100,000
 - \$25,000/iteration
 - Assume four iterations
- Software engineer (PT): \$50,000/year
- Manufacturing expert (PT): \$50,000/year
- Outsourced commercial manufacturing house**: \$400,000
 - \$100,000/iteration
 - Assume four iterations to commercial product
 - Assume after two iterations, you'll have a test market device

** replaces the proto house after protos finished



\$400,000 buys us a first proto



The type of funding is a function of objective and business (cash)

- Objective: If you don't want to sell, don't take equity
- Cash: If your business will not generate cash for a while, don't consider debt



Capitalization ('Cap') Table – tells who owns what

	Investment	Price	Shares	%
Thing 1				
Thing 2				



Rana's definition of an investment

- An investment is an opportunity with the risk quantified, reduced: risk and reward quantified
- How to convert an opportunity into an investment?
- You KNOW the first answer!!
- Assumptions, assumptions, assumptions
- Experience
- REAL, hands on, advisors
- Clear about what you don't know or have
- Plan to acquire what you don't know or have
- Path from here to there





The important threesome

Match your funding sources with fundability** and objective##

** See Self Assessment tutorial ## See What's My Objective tutorial



- Just comparables
- Doesn't matter if you're public or private, it's what you can negotiate

